

**FINDINGS AND DETERMINATION OF THE COMMISSIONER
PURSUANT TO [IC 13-14-9-8](#) AND DRAFT RULE
LSA Document #16-529**

NATIONAL AMBIENT AIR QUALITY STANDARDS FOR OZONE**PURPOSE OF NOTICE**

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for amendments to Indiana's rules at [326 IAC 1-3-4](#) concerning the national ambient air quality standards for the 2015 8-hour ozone standard. IDEM is soliciting written comment on the draft rule language and will schedule a public hearing before the Environmental Rules Board (board) for consideration of adoption of these rules.

CITATIONS AFFECTED: [326 IAC 1-3-4](#).

AUTHORITY: [IC 13-14-8](#); [IC 13-17](#).

STATUTORY REQUIREMENTS

[IC 13-14-9-8](#) recognizes that, under certain circumstances, it may be appropriate to reduce the number of public comment periods and public hearings usually provided for under the [IC 13-14-9](#) environmental rulemaking process. In cases where the commissioner determines that there is no reasonably anticipated benefit from a second public comment period and first public hearing to either the environment or persons regulated or otherwise affected by the proposed rule, IDEM may forgo these comment periods and proceed directly to the public hearing and board meeting at which the draft rule is considered for adoption. Two opportunities for public comment (with this notice and at the public hearing prior to adoption of the rule) remain under this procedure.

If the commissioner makes the determination of no anticipated benefit required by [IC 13-14-9-8](#), the commissioner shall prepare written findings and publish those findings in the Indiana Register prior to the board meeting at which the draft rule is to be considered for adoption and include them in the board packet prepared for that meeting. This document constitutes the commissioner's written findings pursuant to [IC 13-14-9-8](#).

The statute provides for this shortened rulemaking process if the commissioner determines that:

(1) the rule constitutes:

(A) an adoption or incorporation by reference of a federal law, regulation, or rule that:

(i) is or will be applicable to Indiana; and

(ii) contains no amendments that have a substantive effect on the scope or intended application of the federal law or rule;

(B) a technical amendment with no substantive effect on an existing Indiana rule; or

(C) an amendment to an existing Indiana rule, the primary and intended purpose of which is to clarify the existing rule; and

(2) the rule is of such nature and scope that there is no reasonably anticipated benefit to the environment or the persons referred to in [IC 13-14-9-7\(a\)\(2\)](#) from:

(A) exposing the rule to diverse public comment under [IC 13-14-9-3](#) or [IC 13-14-9-4](#);

(B) affording interested or affected parties the opportunity to be heard under [IC 13-14-9-3](#) or [IC 13-14-9-4](#); and

(C) affording interested or affected parties the opportunity to develop evidence in the record collected under [IC 13-14-9-3](#) and [IC 13-14-9-4](#).

BACKGROUND

The Clean Air Act (CAA) requires that the United States Environmental Protection Agency (U.S. EPA) set primary and secondary National Ambient Air Quality Standards (NAAQS) for the six criteria air pollutants considered harmful to public health and the environment. These pollutants are carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide. The CAA requires U.S. EPA to set health-based or "primary" standards at a level judged to be "requisite to protect the public health with an adequate margin of safety" and to establish secondary standards that are designed to protect against welfare effects, defined as "any known or anticipated adverse effects associated with the pollutant in the ambient air" including effects on crops, vegetation, wildlife, and visibility. Sections 108 and 109 of the CAA govern the review and revision of these standards once every five years to determine if revisions to the standards are appropriate.

Ground-level ozone is formed from a series of chemical reactions between nitrogen oxides and volatile organic compounds in the presence of sunlight. Automobile emissions, industrial facilities, electric utilities, and gasoline vapors from refueling are primary sources of ozone forming compounds. Exposure to high ozone levels can be harmful to more vulnerable, at-risk populations, such as the elderly, children, and those with chronic

conditions like asthma, bronchitis, and emphysema. Adverse health effects from ozone exposure include chest pain, throat irritation, coughing, and congestion, in addition to reduced lung function and inflammation in the lining of the lungs.

U.S. EPA issued a revised primary and secondary NAAQS for ozone in the October 26, 2015, Federal Register (FR) published at 80 FR 65292. Ozone standards were initially promulgated in 1971, with 1-hour standards set at 0.08 parts per million (ppm) for total photochemical oxidants. In 1979, U.S. EPA revised the NAAQS from an hourly average of 0.08 ppm total photochemical oxidants to an hourly average of 0.12 ppm ozone. In 1997, U.S. EPA revised the standard again, setting the new limit at 0.08 ppm averaged over an 8-hour time frame. U.S. EPA made further revisions to the standards as legally mandated in the CAA, increasing the stringency of 8-hour ozone standards to provide increased protection for public health and welfare. In the 2008 revision, U.S. EPA further lowered the 8-hour ozone standard to 0.075 ppm. The most recent effort by U.S. EPA to protect the public and at-risk groups from ozone pollution through the October 26, 2015, revision resulted in a further strengthening of the 8-hour primary and secondary NAAQS to a level of 0.070 ppm.

In this rulemaking, IDEM is proposing to amend [326 IAC 1-3-4](#) to revise the 8-hour ozone standard to 0.070 ppm and to make formatting corrections.

[IC 13-14-9-4](#) Identification of Restrictions and Requirements Not Imposed under Federal Law

No element of the draft rule imposes either a restriction or a requirement on persons to whom the draft rule applies that is not imposed under federal law. This draft rule imposes no restrictions or requirements because it is a direct adoption of federal requirements that are applicable to Indiana and contains no amendments that have a substantive effect on the scope or application of the federal rule.

Potential Fiscal Impact

This rulemaking will amend the 8-hour ozone standard to ensure consistency with federal regulations and make formatting corrections. Because this is an incorporation of existing federal law, no impact beyond that already imposed by the federal law is imposed by this rulemaking.

Public Participation and Work Group Information

At this time, no work group is planned for the rulemaking. If you feel that a work group or other informal discussion on the rule is appropriate, please contact Keelyn Walsh, Rules Development Branch, Office of Legal Counsel at (317) 232-8229 or (800) 451-6027 (in Indiana).

Small Business Assistance Information

IDEM established a compliance and technical assistance program (CTAP) under [IC 13-28-3](#). The program provides assistance to small businesses and information regarding compliance with environmental regulations. In accordance with [IC 13-28-3](#) and [IC 13-28-5](#), there is a small business assistance program ombudsman to provide a point of contact for small businesses affected by environmental regulations. Information on the CTAP and other resources available can be found at:

www.in.gov/idem/ctap

For purposes of [IC 4-22-2-28.1](#), small businesses affected by this rulemaking may contact the Small Business Regulatory Coordinator:

Angela Taylor
IDEM Small Business Regulatory Coordinator/CTAP Small Business Liaison
IGCN 1316
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 233-0572 or (800) 988-7901
ctap@idem.in.gov

For purposes of [IC 4-22-2-28.1](#), the Small Business Ombudsman designated by [IC 4-4-35-8](#) is:

Robert Warner
Small Business Ombudsman
Indiana Economic Development Corporation
One North Capitol, Suite 600
Indianapolis, IN 46204
(317) 232-5679
rwarner@iedc.in.gov

Resources available to regulated entities through the small business ombudsman include the ombudsman's duties stated in [IC 4-4-35-8](#), specifically [IC 4-4-35-8\(9\)](#), investigating and attempting to resolve any matter regarding compliance by a small business with a law, rule, or policy administered by a state agency, either as a party to a proceeding or as a mediator.

The Small Business Assistance Program Ombudsman is:

Brian Rockensuess
IDEM Small Business Assistance Program Ombudsman/Office of Government and Community Affairs
IGCN 1301
100 North Senate Avenue

Indianapolis, IN 46204-2251
(317) 234-3386 or (800) 451-6027
brockens@idem.in.gov

FINDINGS

The commissioner of IDEM has prepared findings regarding rulemaking on ambient air quality standards as required by federal rule. These findings are prepared under [IC 13-14-9-8](#) and are as follows:

- (1) This rule is the direct adoption of federal requirements that are applicable to Indiana and it contains no amendments that have a substantive effect on the scope or intended application of the federal rule.
- (2) Indiana is required by federal law to adopt ambient air quality standards as established by the U.S. Environmental Protection Agency.
- (3) The environment and persons regulated or otherwise affected by the proposed rule will benefit from prompt adoption of this rule, because it offers consistency between federal and state ambient air quality standards.
- (4) I have determined that, under the specific circumstances pertaining to this rule, there would be no reasonably anticipated benefit to the environment or to persons regulated or otherwise affected by the proposed rule from the first or second written comment period under [IC 13-14-9-3](#) or [IC 13-14-9-4](#), or from the first public hearing under [IC 13-14-9-5\(a\)\(1\)](#).
- (5) The draft rule is hereby incorporated into these findings.

Carol S. Comer
Commissioner
Indiana Department of Environmental Management

REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the draft rule. Comments may be submitted in one of the following ways:

- (1) By mail or common carrier to the following address:
LSA Document #16-529 NAAQS for Ozone
Keelyn Walsh
Rules Development Branch
Office of Legal Counsel
Indiana Department of Environmental Management
Indiana Government Center North
100 North Senate Avenue
Indianapolis, IN 46204-2251
- (2) By facsimile to (317) 233-5970. Please confirm the timely receipt of your faxed comments by calling the Rules Development Branch at (317) 232-8922.
- (3) By electronic mail to kwash@idem.in.gov. To confirm timely delivery of submitted comments, please request a document receipt when sending the electronic mail. **PLEASE NOTE: Electronic mail comments will NOT be considered part of the official written comment period unless they are sent to the address indicated in this notice.**
- (4) Hand delivered to the receptionist on duty at the thirteenth floor reception desk, Office of Legal Counsel, Indiana Government Center North, 100 North Senate Avenue, Indianapolis, Indiana.

Regardless of the delivery method used, to properly identify each comment with the rulemaking action it is intended to address, each comment document must clearly specify the LSA document number of the rulemaking.

COMMENT PERIOD DEADLINE

All comments must be postmarked, faxed, or time stamped not later than January 6, 2017. Hand-delivered comments must be delivered to the appropriate office by 4:45 p.m. on the above-listed deadline date.

Additional information regarding this action may be obtained from Keelyn Walsh, Rules Development Branch, Office of Legal Counsel, (317) 232-8229 or (800) 451-6027 (in Indiana).

DRAFT RULE

SECTION 1. [326 IAC 1-3-4](#) IS AMENDED TO READ AS FOLLOWS:

[326 IAC 1-3-4](#) Ambient air quality standards

Authority: [IC 13-14-8](#); [IC 13-17-3-4](#); [IC 13-17-3-11](#)

Sec. 4. (a) All measurements of air quality that are expressed as mass per unit volume, other than for the particulate matter (PM_{2.5}) standards contained in subsection (b)(8) and lead (Pb) standards contained in subsection (b)(6), ~~shall must~~ be corrected to a reference temperature of twenty-five (25) degrees Celsius and a reference pressure of seven hundred sixty (760) millimeters of mercury (one thousand thirteen and two-tenths (1,013.2) millibars), as micrograms per cubic meter (µg/m³). Measurements of PM_{2.5}, for purposes of comparison to the standards contained in subsection (b)(8), and Pb, for purposes of comparison to the standards contained in subsection (b)(6), ~~shall must~~ be reported based on actual ambient air volume measured at the actual ambient temperature and pressure at the monitoring site during the measurement period.

(b) Ambient air quality standards are as follows:

(1) Sulfur oxides as sulfur dioxide (SO₂) requirements are as follows:

(A) For the primary one (1) hour ambient air quality standard, the maximum permissible ambient air quality level ~~shall must~~ be seventy-five (75) parts per billion (ppb). The one (1) hour standard is attained when the three (3) year average of the annual ninety-ninth percentile of the daily maximum one (1) hour average concentration is less than or equal to seventy-five (75) ppb, as determined in accordance with 40 CFR 50, Appendix T* and measured in the ambient air as SO₂ by a reference method based on 40 CFR 50, Appendix A-1* or 40 CFR 50, Appendix A-2*, or an equivalent method designated in accordance with 40 CFR 53*.

(B) For the secondary standard, the following value ~~shall represent~~ **represents** the maximum permissible ambient air quality level: one thousand three hundred (1,300) µg/m³ (five-tenths (0.5) ppm) maximum three (3) hour concentration not to be exceeded more than once per year. The three (3) hour averages ~~shall be~~ **are** determined from successive nonoverlapping three (3) hour blocks starting at midnight each calendar day and ~~shall be~~ **are** rounded to one (1) decimal place (fractional parts equal to or greater than five-hundredths (0.05) ppm ~~shall be~~ **are** rounded up). Sulfur oxides ~~shall be~~ **are** measured in the ambient air as SO₂ by the reference method described in 40 CFR 50, Appendix A-1* or 40 CFR 50, Appendix A-2*, or by an equivalent method designated in accordance with 40 CFR 53*. To demonstrate attainment, the second-highest three (3) hour average must be based upon hourly data that are at least seventy-five percent (75%) complete in each calendar quarter. A three (3) hour block average ~~shall be~~ **is** considered valid if:

- (i) all three (3) hourly averages for the three (3) hour period are available; or
- (ii) only one (1) or two (2) hourly averages are available, but the three (3) hour average would exceed the level of the standard when zeros are substituted for the missing values, subject to the rounding rule of this clause.

In all cases, the three (3) hour block average ~~shall be~~ **is** computed as the sum of the hourly averages divided by three (3).

(C) SO₂ values may be converted to ppm using the conversion factor two thousand six hundred twenty (2,620) µg/m³ = one (1) ppm.

(2) Total suspended particulates (TSP) requirements are as follows:

(A) For primary standards, the following values ~~shall represent~~ the maximum permissible ambient air quality levels:

- (i) Seventy-five (75) µg/m³ annual geometric mean.
- (ii) Two hundred sixty (260) µg/m³ maximum twenty-four (24) hour average concentration not to be exceeded more than one (1) day per year.

(B) For secondary standards, the following value ~~shall represent~~ **represents** maximum permissible ambient air quality levels: one hundred fifty (150) µg/m³ maximum twenty-four (24) hour average concentration not to be exceeded more than one (1) day per year.

(3) Carbon monoxide (CO) requirements are as follows:

(A) For primary and secondary standards, the following values ~~shall represent~~ the maximum permissible ambient air quality levels:

- (i) Ten (10) milligrams per cubic meter (mg/m³) (ten thousand (10,000) µg/m³) (nine (9) ppm) maximum eight (8) hour average concentration not to be exceeded more than once per year.
- (ii) Forty (40) mg/m³ (forty thousand (40,000) µg/m³) (thirty-five (35) ppm) maximum one (1) hour average concentration not to be exceeded more than once per year.

(B) CO values may be converted to ppm using the conversion factor one thousand one hundred forty-five (1,145) µg/m³ = one (1) ppm.

(4) Ozone (O₃) requirements are as follows:

(A) For the one (1) hour ozone standards, the level of the one (1) hour primary and secondary ambient air quality standards for ozone measured by a reference method based on 40 CFR 50, Appendix D* and

designated in accordance with 40 CFR 53* is twelve-hundredths (0.12) ppm (two hundred thirty-five (235) $\mu\text{g}/\text{m}^3$). The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above twelve-hundredths (0.12) ppm (two hundred thirty-five (235) $\mu\text{g}/\text{m}^3$) is equal to or less than one (1) as determined by 40 CFR 50, Appendix H*.

(B) For the eight (8) hour ozone standards, the:

(i) level of the eight (8) hour primary and secondary ambient air quality standards for ozone, measured by a reference method based on 40 CFR 50, Appendix D*, **as amended by 80 FR 65453**, and designated in accordance with 40 CFR 53*, **as amended by 80 FR 65460**, is ~~seventy-five~~ **seventy**-thousandths (~~0.075~~) **(0.070)** ppm, daily maximum eight (8) hour average; and

(ii) eight (8) hour primary and secondary ozone ambient air quality standards are met at an ambient air quality monitoring site when the **three (3) year** average of the annual fourth highest daily maximum eight (8) hour average ozone concentration is less than or equal to ~~seventy-five~~ **seventy**-thousandths (~~0.075~~) **(0.070)** ppm as determined in accordance with 40 CFR 50, Appendix ~~P*~~ **U***, **as added by 80 FR 65458**.

(C) O_3 values may be converted to ppm using the conversion factor one thousand nine hundred sixty-five (1,965) $\mu\text{g}/\text{m}^3 = 1.0$ ppm.

(5) Nitrogen dioxide (NO_2) requirements are as follows:

(A) For the primary one (1) hour ambient air quality standard, the maximum permissible ambient air quality level ~~shall be~~ **is** one hundred (100) ppb, one (1) hour average concentration, measured in the ambient air as NO_2 . The one (1) hour standard is attained when the three (3) year average of the annual ninety-eighth percentile of the daily maximum one (1) hour average concentration is less than or equal to one hundred (100) ppb, as determined in accordance with 40 CFR 50, Appendix S*.

(B) For the annual primary standard, the following value ~~shall represent~~ **represents** the maximum permissible ambient air quality level: one hundred (100) $\mu\text{g}/\text{m}^3$ (fifty-three thousandths (0.053) ppm) annual average concentration in a calendar year. The annual primary standard is attained when the annual average concentration in a calendar year is less than or equal to fifty-three (53) ppb, as determined in accordance with 40 CFR 50, Appendix S* for the annual standard.

(C) For the annual secondary standard, the following value ~~shall represent~~ **represents** the maximum permissible ambient air quality level: one hundred (100) $\mu\text{g}/\text{m}^3$ (fifty-three thousandths (0.053) ppm) annual arithmetic mean concentration in a calendar year. The secondary standard is attained when the annual arithmetic mean concentration in a calendar year is less than or equal to fifty-three thousandths (0.053) ppm, rounded to three (3) decimal places (fractional parts equal to or greater than five ten-thousandths (0.0005) ppm must be rounded up). To demonstrate attainment, an annual mean must be based upon hourly data that are at least seventy-five percent (75%) complete or upon data derived from manual methods that are at least seventy-five percent (75%) complete for the scheduled sampling days in each calendar quarter.

(D) NO_2 values may be converted to ppm using the conversion factor one thousand eight hundred eighty (1,880) $\mu\text{g}/\text{m}^3 = \text{one (1) ppm}$.

(E) The levels of the standards ~~shall be~~ **are** measured by:

- (i) a reference based on 40 CFR 50, Appendix F*; or
- (ii) an equivalent method designated in accordance with 40 CFR 53*.

(6) Pb: For primary and secondary standards, the following value ~~shall represent~~ **represents** the maximum permissible ambient air quality level: fifteen-hundredths (0.15) $\mu\text{g}/\text{m}^3$, arithmetic mean concentration over a three (3) month period. The standards are attained when the maximum arithmetic three (3) month mean concentration for a three (3) year period is less than or equal to fifteen-hundredths (0.15) $\mu\text{g}/\text{m}^3$, as determined in accordance with 40 CFR 50, Appendix R* and measured in the ambient air as Pb by either:

(A) a reference method based on 40 CFR 50, Appendix G*, and designated in accordance with 40 CFR 53*;
or

(B) an equivalent method designated in accordance with 40 CFR 53*.

(7) PM_{10} : For primary and secondary standards, the maximum permissible ambient air quality level is one hundred fifty (150) $\mu\text{g}/\text{m}^3$ maximum twenty-four (24) hour average concentration. The standards are attained when the expected number of days per calendar year with a twenty-four (24) hour average concentration above one hundred fifty (150) $\mu\text{g}/\text{m}^3$, as determined in accordance with 40 CFR 50, Appendix K*, is equal to or less than one (1).

(8) $\text{PM}_{2.5}$ requirements are as follows:

(A) For the primary annual standard, the following value ~~shall represent~~ **represents** the maximum permissible ambient air quality level: twelve (12) micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) annual arithmetic mean concentration. The standard is attained when the annual arithmetic mean concentration is less than or equal to twelve (12) $\mu\text{g}/\text{m}^3$, as determined in accordance with 40 CFR 50, Appendix N*, ~~as amended by 78 FR 3277~~, and measured in the ambient air as $\text{PM}_{2.5}$ by either:

- (i) a reference method based on 40 CFR 50, Appendix L*, and designated in accordance with 40 CFR 53*;
or

- (ii) an equivalent method designated in accordance with 40 CFR 53*.
- (B) For the secondary annual standard, the following value ~~shall represent~~ **represents** the maximum permissible ambient air quality level: fifteen (15) micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) annual arithmetic mean concentration. The standard is attained when the annual arithmetic mean concentration is less than or equal to fifteen (15) $\mu\text{g}/\text{m}^3$, as determined in accordance with 40 CFR 50, Appendix N*, ~~as amended by 78 FR 3277~~, and measured in the ambient air as $\text{PM}_{2.5}$ by either:
 - (i) a reference method based on 40 CFR 50, Appendix L*, and designated in accordance with 40 CFR 53*;
or
 - (ii) an equivalent method designated in accordance with 40 CFR 53*.
- (C) For the primary and secondary 24-hour standard, the following value ~~shall represent~~ **represents** the maximum permissible ambient air quality level: thirty-five (35) $\mu\text{g}/\text{m}^3$ twenty-four (24) hour average concentration. The standards are attained when the ninety-eighth percentile twenty-four (24) hour concentration is less than or equal to thirty-five (35) micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), as determined in accordance with 40 CFR 50, Appendix N*, ~~as amended by 78 FR 3277~~, and measured in the ambient air as $\text{PM}_{2.5}$ by either:
 - (i) a reference method based on 40 CFR 50, Appendix L*, and designated in accordance of 40 CFR 53*; or
 - (ii) an equivalent method designated in accordance with 40 CFR 53*.

*These documents are incorporated by reference. Copies may be obtained from the Government ~~Printing~~ **Publishing** Office, 732 North Capitol Street NW, Washington, D.C. 20401 www.gpo.gov, or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, ~~Thirteenth Floor~~, 100 North Senate Avenue, **Thirteenth Floor**, Indianapolis, Indiana 46204.

(Air Pollution Control Division; [326 IAC 1-3-4](#); filed Mar 10, 1988, 1:20 p.m.: 11 IR 2378; filed Apr 13, 1988, 3:35 p.m.: 11 IR 3020; readopted filed Jan 10, 2001, 3:20 p.m.: 24 IR 1477; filed May 21, 2002, 10:20 a.m.: 25 IR 3055; filed Mar 9, 2004, 3:45 p.m.: 27 IR 2224; filed Dec 20, 2004, 2:15 p.m.: 28 IR 1471; filed Mar 6, 2006, 3:00 p.m.: 29 IR 2179; filed Sep 24, 2010, 1:44 p.m.: [20101020-IR-326100127FRA](#); filed Feb 9, 2011, 10:29 a.m.: [20110309-IR-326100495FRA](#); filed Dec 19, 2012, 4:22 p.m.: [20130116-IR-326120510FRA](#); filed Jul 8, 2014, 2:28 p.m.: [20140806-IR-326130358FRA](#))

[Notice of Public Hearing](#)

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